

## **ABSTRACT**

*With the development of wireless telecommunication technology where this technology no longer requires cable to communicate each other so that becomes more practical, flexible and support the mobility of users. The technology that meets the needs of wireless communication is a microstrip antenna. Microstrip antenna is an antenna that has a very small shape and size. The antenna is designed to provide wireless telecommunications equipment that does not exhibit the physical antenna due to its small and thin structure. Design technique and realization in this Final Project is to do the calculation using equation to get antenna dimension then do design using simulator that is Ansoft HFSS 13.0 to more help in workmanship. In the design of microstrip antennas need to be optimized in order to improve the quality of parameter values (VSWR (Voltage Wave Standing Ratio), impedance and bandwidth) are optimal. To improve the quality of these parameters, the design and realization of circular patch microstrip antenna with shorting pin technique capable of working at 2400 MHz to 2480 MHz for WLAN applications. Shorting pin technique is done by inserting the copper pin on the substrate by punching the substrate. The result of design and realization of this microstrip antenna has value of VSWR at 2.4 GHz frequency equal to 1,413 with bandwidth yielded equal to 46 MHz, gain value at frequency 2,44 GHz is obtained equal to 3,33 dB, radiation pattern form yielded is uni-directional , And the resulting polarization is ellips.*

*Keywords : Circular Microstrip patch, WLAN, VSWR, bandwidth, polarization*